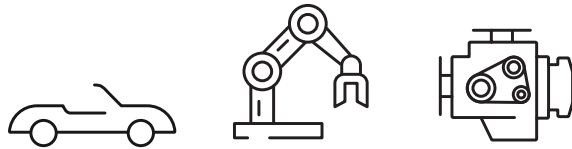


Zapp is certified to ISO 9001 | IATF 16949



## Categorization

- Ferritic, corrosion resistant steel
- DIN EN 10088-3
- AISI 430

## Typical Applications

Zapp® 1.4016 IM is mainly used in solenoid valves for pneumatic, hydraulic and HVAC applications.

## Processing and Usage Properties

Zapp® 1.4016 (similar to X6Cr17) is a stainless steel with excellent soft magnetic properties. It is designed for the volume production of precision turned parts and should be used if welding operation is required. It is resistant in water, steam and other less aggressive media.

For improved properties in selective cases we recommend the following Zapp® grades:

## Surface Finish

2G DIN EN 10088-3 – Class 3

## Cold Heading

Zapp® 1.4003 IA

## Corrosion Resistance

Zapp® 1.4113 IM

## Machinability

Zapp® 1.4105 IM

Zapp® 1.4105 IL

## Magnetic Properties

Zapp® 1.4005 IA

## Weldability

Zapp® 1.4511 IA

## Typical Analysis\*

| C      | Si     | Mn     | S       | Cr        | Mo |
|--------|--------|--------|---------|-----------|----|
| < 0.06 | < 1.00 | < 1.00 | < 0.015 | 16.0-18.0 | -  |

\* Weight percentage/approximate value

## Mechanical and Physical Properties

|                                  |                 |
|----------------------------------|-----------------|
| Tensile strength (soft annealed) | 350 - 550 [MPa] |
|----------------------------------|-----------------|

## Magnetic Properties of Round Bars\*

Ø 6.8 – ≤ 27 mm

|                               |                              |
|-------------------------------|------------------------------|
| Coercitive strength           | H <sub>c</sub> < 200 [A/m]   |
| Maximum relative permeability | μ <sub>max</sub> > 1,500     |
| Saturation polarization       | J <sub>s</sub> > 1.6 [T]     |
| Remanence                     | B <sub>r</sub> 0.4 – 1.3 [T] |
| Specific el. resistance       | ρ > 0.53 [μΩm]               |

\* Profiles and other sizes may differ. These values represent our standard properties.

Improved properties are possible but must be agreed upon.

## Delivery Forms\*

|            |                        |
|------------|------------------------|
| Round bars | Annealed, ground       |
| Profiles   | Annealed, straightened |

\* Crack tested according to DIN EN 10277-1, Table 1 Surface class 1-4, US-Testing: KSR (FBH) 0.7 mm or better

PRECISION WIRE

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Further information regarding our products and locations are available in our image brochure and under [www.zapp.com](http://www.zapp.com)

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